COOPERATIVE EXTENSION SERVICE

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Entomology
Insect Information Series

Providing Leadership in Environmental Entomology
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TERMITE BAITS

To understand how termite baits work, it is important to know a little about the biology and behavior of subterranean termites. Please see our fact sheet on Subterranean Termite Control (EIIS/HS-1) if you want to know more about termites. Please see our fact sheet on Choosing a Pest Control Company (EIIS/HS-23) if you are planning to hire a pest control service.

Background. Before 1995, protecting structures from subterranean termites was most commonly accomplished by applying liquid termiticides to soil. These termiticides formed a residual chemical barrier to termites tunneling from their subterranean nests into buildings. At that time, all available liquid termiticides were repellent. They worked not by killing termites but by repelling termites from entering structures. In 1995, baiting systems for subterranean termites that leave no residual chemical in the soil, became available. Unlike the older liquid barrier treatments, termite baits were designed to directly reduce or eliminate termite colonies.

How They Work. Although each termite baiting system is different, they all use monitoring stations placed in the ground around a structure approximately every 10 to 20 feet. Additional stations are also placed in areas near the structure likely to be conducive to foraging termites, such as tree stumps. When initially installed, the stations do not attract termites and most bait systems do not contain any toxicant. The stations are monitored for termite activity by pest control professionals either on a monthly or quarterly schedule. When termites are detected, baits containing a cellulose matrix laced with a toxicant are added to the active stations. Termites feed on the baits and spread the toxicant throughout their colony.

Eventually, the toxicant eliminates or at least greatly reduces the entire colony. Baiting continues until termites are no longer detected in the active stations. Once baiting is discontinued, the bait-laced cellulose matrix is usually replaced with wood or another type of cellulose and the system returns to monitoring. After baiting, the stations around the structure should be monitored again on a regular schedule to detect and protect the structure from future termite invasions. Some termite baiting systems also have an above-ground component that may be effective when infestations are accessible within the structure.

A pest control professional should monitor and maintain your termite baiting system on a regular schedule.

Bait System Types. As of 2003, five professional termite baiting systems were registered in South Carolina that were labeled to protect structures from termite infestation. They are:

1) ***Exterra*® Termite Interception and Baiting System** (Ensystex) relies on an insect growth regulator (IGR) called diflubenzuron. The bait product is called *Labyrinth*®. It is available as both an in-ground and above-ground system. It may be used alone or with a localized spot treatment with liquid termiticide.
2) ***Firstline*® Termite Defense System^{SM}** (FMC Corporation) uses a slow-acting stomach poison, sulfluramid, as the active ingredient and is available for in-ground and above-ground baiting,. It too, may be used with a localized liquid treatment.

3) **Outpost Termite Detection System (TDS)®** (Bayer Environmental Science) also uses diflubenzuron as the active ingredient. This in-ground system can be used with Bayer's above-ground product, *Premise Gel*, (imidacloprid), or with liquid spot treatments.
4) ***Sentricon Colony Elimination System*®** (Dow AgroSciences) uses an insect growth regulator called hexaflumuron, *Recruit® II.* This will soon be replaced with another IGR, noviflumuron, and will be on the market as *Recruit® III*. This baiting system is produced for both in-ground and above-ground installation. It is intended to be used alone without any localized spot treatment with a liquid termiticide.
5) **Subterfuge Termite Bait®** (BASF) also uses a slow-acting stomach poison, hydramethylnon, as the active ingredient. Unlike other systems there is no monitoring phase. The bait is placed in the station from the beginning. Localized application of liquid termiticide also may be used.

Research has shown that termite baiting systems can do a good job suppressing or eliminating termite colonies. During our work with termite baits, we have learned that there is a lot more to termite baiting than just installing stations. It is important for users to have knowledge and training about termites and baiting techniques. For example, differences in termite species, seasonal and geographic differences, the number of termite colonies around a structure, an idea of colony size, and the micro-environment in which the bait is placed all play an important part in termite baiting success. Also, it is important to know that even if a termite colony has been eliminated, reinfestation can occur from neighboring colonies. For these reasons, it is advisable for homeowners to only use termite baiting systems installed and monitored by professionals. We do not recommend homeowners try to do their own termite control with over-the-counter baits or liquid treatments.

Termite baits have advantages over liquid termiticides and some limitations. Advantages include: very little toxicant is needed to control termites, baits are inside stations away from children and pets, baits have no odor, it is not necessary to drill holes in your house, you get more frequent visits/inspections from your pest control professional and it is highly unlikely that termite bait toxicants will get into non-target sites such as wells, drains or ponds. Disadvantages include: baits only work if termites find them, locating bait stations by termites can take several weeks to months and in some situations years, and termite baiting systems may be more expensive than traditional liquid treatments.

To decide if termite baiting is best for you, discuss all your termite control options with your pest control professional. Treatment options include direct wood treatments, soil treatments with repellent and non-repellent liquid termiticides and termite bait systems. Some professionals may offer a combination of treatments. Consider interviewing two or three professionals if you are shopping for a new service. In addition to cost, make sure you understand the control methods they are planning for your home and know the details of any guarantee they offer to back up their work.

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